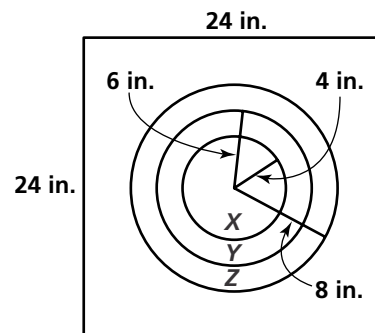


# Practice 7-8

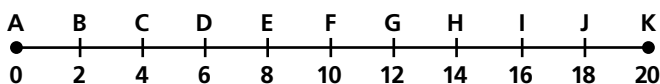
## Geometric Probability

Use the dartboard at the right for Exercises 1–3.

1. If a dart hits the board, find the probability that it will land in region  $X$ .
2. If a dart hits the board, find the probability that it will land in region  $Y$ .
3. If a dart hits the board, find the probability that it will land in region  $Z$ .



Find the probability that a point chosen at random from  $\overline{AK}$  is on the given segment.



4.  $\overline{CF}$
5.  $\overline{BI}$
6.  $\overline{GK}$
7.  $\overline{FG}$
8.  $\overline{AK}$
9.  $\overline{AC}$
10. Roberto's trolley runs every 45 minutes. If he arrives at the trolley stop at a random time, what is the probability that he will *not* have to wait more than 10 minutes?
11. The state of Connecticut is approximated by a rectangle 100 mi by 50 mi. Hartford is approximately at the center of Connecticut. If a meteor hit the earth within 200 mi of Hartford, find the probability that the meteor landed in Connecticut.
12. A stop light at an intersection stays red for 60 seconds, changes to green for 45 seconds, and then turns yellow for 15 seconds. If Jamal arrives at the intersection at a random time, what is the probability that he will have to wait at a red light for more than 15 seconds?

In each figure, a point between  $A$  and  $B$  on the number line is chosen at random. What is the probability that the point is between  $C$  and  $D$ ?

